

patent literature references to support the rejection. Specifically, the Official Action relies on Adamson, *Physical Chemistry of Surfaces*; Dobson, "Protection of Pharmaceutical and Diagnostic Products Through Desiccant Technology"; Bungay, Rensselaer Polytechnic Institute, "Adsorption"; Slejko et al., "Adsorption Phenomena"; Hagan, "What Is A Desiccant?"; SorbentSystems.com, "Desiccants – Technical Data and Terminology"; Brotman, Alliance Desiccants, "Silica gel"; IUPAC.org, "Adsorption and related phenomena: general concepts and terminology" and Myers et al., "Adsorption of Porous Materials at High Pressure: Theory and Experiment." The Applicants respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. The independent claims recite that a drying agent

chemically absorbs moisture, maintains a solid state after the moisture absorption, and has a porosity of 20% or more. Kawami and the articles by Adamson, Dobson, Bungay, Slejko, Hagan, SorbentSystems.com, Brotman, IUPAC.org and Myers, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

Kawami appears to teach that "drying substance 8 comprises a solid compound, which chemically absorbs moisture and maintains its [solid] state even after absorbing the moisture" (column 4, lines 35-37). However, Kawami does not teach or suggest that the chemically absorbing solid compound of Kawami should have a porosity of 20% or more. The Official Action concedes this point (page 4, Paper No. 20050824).

The Official Action asserts that "[it] would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to form the drying agent having a porosity of 20% or more ... since the Examiner takes Official Notice that high porosity drying agent bodies are old and well known in the art" (page 5, Id.). Further, the Official Action asserts that "[one] of ordinary skill in the art would have been motivated to form a drying agent into a body with a high porosity to enhance the effectiveness of the drying agent by increasing its surface area and allowing more of the agent to contact/react with moisture" (Id.). The Applicant respectfully disagrees and traverses the above-referenced assertions in the Official Action.

Although Kawami appears to teach a solid, chemically absorbing drying substance 8, the teachings of Adamson, Dobson, Bungay, Slejko, Hagan, SorbentSystems.com, Brotman, IUPAC.org and Myers are directed to adsorbing materials, such as silica gel. Therefore, it is not clear how the teachings of these references apply to the drying agent of Kawami. Specifically, the above-referenced articles do not teach or suggest that the absorbing drying substance of Kawami should have the characteristics of an adsorbing material, much less that the absorbing drying substance of Kawami should have a porosity of 20% or more.

Specifically, Kawami appears to teach that drying substance 8 comprises a solid compound, which chemically absorbs moisture and maintains its solid state after absorbing the moisture, and Kawami appears to teach the following (column 5, lines 11-24):

As a method of enclosing the drying substance 8 in the airtight container 10, a method of consolidating the above explained chemical compound to be a solid compound formed in a predetermined shape and setting this solid compound in the glass sealing case 7, a method of packing the above explained chemical compound into an air-permeable bag and fixing the bag in the glass sealing case 7, a method of preparing a partition in the glass sealing case 7 and enclosing the above explained chemical compound into this partition, and a method of forming a film of the above explained chemical compound, by a vacuum-vapor deposition, a sputtering, a spinner-coating and so on, on the internal surface of the glass sealing case 7, are available, for example.

However, Kawami does not recognize that the drying agent, which chemically absorbs moisture and maintains its solid state even after absorbing the moisture, needs to have a porosity of 20% or more as a porous body. The present inventors found that a drying agent generally becomes a dense film and can not demonstrate sufficient hygroscopic ability in a case of forming the drying agent by vacuum evaporation, sputtering or spin coating, as shown, for example, at page 6, lines 14-21 of the present specification.

Adamson, Dobson, Bungay, Slejko, Hagan, SorbentSystems.com, Brotman, IUPAC.org and Myers do not cure these deficiencies in the teachings of Kawami. Although the Official Action cites these documents allegedly in support of an assertion that the absorbing drying agent of Kawami should have a porosity of 20% or more, these documents merely disclose a drying agent such as carbon, silica gel and alumina which adsorbs, not absorbs moisture by physical bonds.


Therefore, the prior art does not teach or suggest that a drying agent chemically absorbs moisture, maintains a solid state after the moisture absorption, and has a porosity of 20% or more.

Since Kawami, Adamson, Dobson, Bungay, Slejko, Hagan, SorbentSystems.com, Brotman, IUPAC.org and Myers do not teach or suggest all the

claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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